

THEFT OF AMERICAN INTELLECTUAL PROPERTY: FIGHTING CRIME ABROAD AND AT HOME

A REPORT FROM

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FEBRUARY 12, 2002

Executive Summary

American innovation – and the protection of that innovation by the government – has been a critical component of American economic growth throughout our history. The Founding Fathers had the foresight to provide for protection of intellectual property, giving Congress the power to “promote the progress of science and useful arts” by providing copyrights and patents. According to at least one source, American intellectual property represents the largest single sector of the American economy, employing 4.3 million Americans. Yet, the theft of American intellectual property, through piracy and counterfeiting, has cost American jobs numbering in the hundreds of thousands and has cost the U.S. government tax revenues and U.S. corporations billions of dollars. Piracy rates (the percentage of copies of an item that are illicit) exceed 80% in a number of countries.

Theft of intellectual property is increasing and accelerating as the medium through which companies transmit software, movies, books, music and other forms of intellectual property evolves. As the medium move from analog (audio and video cassettes) to digital (CDs, DVDs) to cybermedia (Internet downloading), the ease of piracy and counterfeiting, and the quality of the product offered, continually improves. With the advent of CDs and DVDs, a sound or video recording no longer deteriorates with each successive copy; the 100th copy is identical to the original. With the advent of the Internet, and particularly the arrival of broadband, an individual can download a full-length feature movie in less than 15 minutes, without ever stepping out the front door. As a result, it is becoming ever more difficult to fight this crime.

It is important to bear in mind that lax enforcement of intellectual property rights in a particular country does not merely harm our interests. In the long run, it harms the interests of those developing countries, because it will preclude the development of their creative industries.

Unfortunately, once a country enacts the requisite laws, summons the adequate will, and provides the necessary resources to combat piracy and counterfeiting, the criminals who profit from stealing intellectual property often simply change venue. Combating intellectual property theft is like squeezing a balloon: when you apply pressure in one area, the air inside simply adjusts and moves elsewhere. Thus, to crack down effectively, we cannot merely focus on a few egregious countries.

Federal laws have long proscribed the intentional infringement of intellectual property, including criminal and civil statutes aimed at protecting copyrights and trademarks. Congress has responded to the particular challenges posed by new and emerging technologies by enacting legislation aimed at high tech piracy. These new statutes can be used to combat, for example, the illegal copying of software, music CDs, and movie DVDs, or the dissemination of decryption codes to “unlock” protected works. Responsibility for overseeing federal law enforcement falls to the Justice Department, which uses specialized units to assist federal prosecutors around the country in bringing suits against high tech pirates.

Much international law is just now coming into effect. The Agreement on Trade-Related Aspects of Intellectual Property, or “TRIPS”, concluded during the 1990s, imposes upon World Trade Organization countries obligations to adequately enforce intellectual property rights. It also provides a mechanism for resolving disputes between

countries. The World Intellectual Property Organization's Copyright Treaty and Performances and Phonograms Treaty will also add to the arsenal of international legal instruments. The former will come into force next month, while it is expected that the latter will take effect by the end of the year.

Enforcement efforts have met with some success. The Justice Department has an entire section of its Criminal Division devoted to computer crimes and intellectual property. Other agencies are coordinating their diverse efforts at prosecuting criminals domestically, stopping the influx of illicit materials from overseas, and stopping the crime in foreign countries. This is being accomplished, among other things, through special prosecutorial units in United States Attorneys' Offices, trade negotiation tools such as Special 301, and training assistance to foreign countries.

While substantial domestic and international laws exist, proposals abound to improve the working of our intellectual property system both at home and abroad. At home, we can dedicate more funding to the fight against intellectual property theft, and better coordinate among federal agencies involved in the effort, as well as between federal and state authorities. Moreover, we can do a better job of making it clear to all Americans that the theft of intellectual property is a crime, and that it hurts us all.

Abroad, we can bring pressure to bear on countries that are recalcitrant in efforts to rein in piracy and counterfeiting; we can encourage the development of intellectual property laws and enforcement through targeted foreign aid for training and equipment; and we can prevail on all countries (including our own) to eliminate the use of illicit intellectual property within their own governments.

Billions of dollars are being stolen, hundreds of thousands of jobs lost. It is worth

the effort to do all we can to stem the tide.

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I. Introduction

The *New York Times* recently reported that illegal copies of “The Lord of the Rings,” a film just recently released to movie theaters here in the United States, are already on sale on the streets of Jalalabad, Afghanistan.¹ Windows XP was available for illegal use on the streets of Moscow two months before it was released in the U.S. by Microsoft.² Every episode of “Seinfeld” is now available for download free to anyone with access to the Internet.³ In September of 2001 alone, 1.5 billion songs were downloaded from Grokster.com, an Internet website that enables users to steal music.⁴ Video games that would cost \$50 each in the United States are sold for the equivalent of 75 cents on the streets of some Chinese cities.⁵

Everyday, thieves steal millions of dollars of American intellectual property from its rightful owners, and hundreds of thousands of American jobs are lost as a result.

American innovation – and the protection of that innovation by the government – has been a critical component of American economic growth throughout our history. The Founding Fathers had the foresight to provide for protection of intellectual property, giving Congress the power to “promote the progress of science and useful arts” by

¹Chivers, C.J. “Afghan City, Free of Taliban, Returns to Rule of the Thieves.” *New York Times*. January 6, 2002.

²Judiciary Staff briefing with the Business Software Alliance, January 17, 2002.

³Judiciary Staff briefing with the Motion Picture Association of America, December 17, 2001.

⁴Judiciary Staff briefing with the Recording Industry Association of America, January 14, 2002.

⁵Lazarus, David. “Lazarus at Large.” *The San Francisco Chronicle*. October 19, 2001.

providing copyrights and patents.⁶ The federal government's vigilance in shielding intellectual property rights remains essential: innovation would slow, businesses would suffer, and jobs would dissolve if technological advances were left unprotected. The American arts and entertainment industry could not survive without the ability to protect and earn income from its ideas. Would U2 continue to make records and go on tour if all of their records, videos, and fan paraphernalia were given out for free? Would the tens of thousands of Americans who staff their concerts and produce their CDs keep their jobs?

Copyrights and trademarks mean nothing if government authorities fail to enforce the protections they provide intellectual property owners. It has been estimated that software piracy alone cost the U.S. economy over 118,000 jobs and \$5.7 billion in wage losses in the year 2000.⁷ Even more, it estimated that the government loses a billion dollars in revenue to piracy each year.⁸ To put that in perspective, with the \$1 billion in lost revenue, the American government could pay for child care services for more than 100,000 children annually.⁹ Alternatively, \$1 billion could be used to fund a Senate

⁶U.S. Constitution, Art. I, Sec. 8, cl. 8.

⁷Note that this does *not* include losses incurred in the entertainment industry.

⁸International Planning and Research Corporation study for the Business Software Alliance, "U.S. Software State Piracy Study." November 2001.

⁹Full-day child care costs between \$4,000 and \$10,000 per year. At \$10,000 per year, \$1 billion would pay for 100,000 children. Children's Defense Fund website, http://www.childrensdefense.org/cc_facts.htm, citing 13 K. Schulman (2000), Issue Brief: The High Cost of Child Care Puts Quality Care Out of Reach for Many Families. Washington, DC: Children's Defense Fund. 14 U.S. Census Bureau (2000), Money Income in the United States: 1999 (Current Population Reports, P60-209), Washington, DC: U.S. Government Printing Office.

proposal to assist schools with emergency school renovation and repair projects.¹⁰

This report aims to (1) highlight some of the problems that have emerged in America's continuing struggle to protect innovators from those who would steal their products, and (2) list some potential solutions for combating piracy at home and abroad.

If we intend to nurture growth and development, the government will have to take a long look at how best to approach the global technological marketplace, and address those who would take advantage of American innovation.

¹⁰ The proposal was included in the Senate's Labor-HHS-Education Appropriations bill. Senate Report 107-84 to accompany S.1536, p. 262. However, it was cut from the final Conference Agreement, presumably due to budgetary issues. House Report, 107-342, p.123.

II. The Problem

When an American owns property, the government has a responsibility to protect that property from theft. When that property is an idea, it deserves our protection no less than if it were land, or a personal object. Who among us would want to expend the effort required to develop a new product if the government were not prepared to punish those who would steal it? If we want to protect American innovation, and by extension American jobs, we need to maintain a vigilant stand against what is commonly known as “intellectual property theft.”

American intellectual property is an immensely valuable – perhaps our most valuable – resource. Not to protect it is equivalent to letting coal be stolen from our mines or water taken from our rivers. With that concern in mind, the American government has developed an infrastructure to protect Americans who rightfully own pieces of intellectual property.

Copyrights protect the authors of “original works of authorship,” including literary, dramatic, musical, artistic, and certain other intellectual works.¹¹ Trademarks provide businesses with exclusive use of “any word, name, symbol, or device” to indicate the source of the goods and to distinguish them from the goods of others.¹²

Unfortunately, the integration of the global economy and emergence of the Internet have eroded some of the walls which protect intellectual property rights from thieves: some of our efforts to protect intellectual property at home have become

¹¹18 U.S.C. § 102.

¹²Koppers Co. v. Krupp-Koppers, 517 F. Supp. 836, 840 (W.D. Pa. 1981); see also 15 U.S.C. § 1127.

outmoded, and certain nations around the world are not doing enough to combat the problem. Advances in digital media have made it tremendously easy to steal and reproduce a variety of media.

This report addresses two types of intellectual property theft: (1) “piracy” is the unlawful theft of a protected product;¹³ and (2) counterfeiting, a type of piracy, is the unauthorized reproduction of a good, in an attempt to pass it off as the original.¹⁴ If criminals reproduced a copy of Microsoft Windows and sold it, they would be committing an act of piracy. If, before selling the reproduction, they also reproduced the software’s packaging so as to give the purchaser the false impression that they were buying a legitimate copy of Windows, they would also be guilty of counterfeiting.¹⁵ Both types of crime represent an enormous threat to the software and entertainment industries. It is clearly the responsibility of governments around the world to protect intellectual property owners from those who would steal their goods.

Let me begin by illustrating the breadth and pervasiveness of intellectual property theft. The International Intellectual Property Alliance estimates that the world of intellectual property represents the largest single sector of the American economy,

¹³Most items generated by the software and entertainment industries are protected by copyrights. Piracy is the violation of that protection.

¹⁴In the case of most items generated by the software and entertainment industries, product names are protected by “trademarks.”

¹⁵Similarly, if a criminal copies a Madonna CD and sells it, without any attempt to make it appear like the original, he is violating Madonna’s “copyright” protections, and committing an act of piracy. If a different criminal manufactures fake brake pads, places a “General Motors” insignia on them, and then sells the brakepads as if they were authentic, she would be violating General Motors’ “trademark protections,” and committing an act of counterfeiting.

almost 5% of the nation's gross domestic product.¹⁶ By comparison, defense spending occupies approximately 3% of U.S. GDP.¹⁷ While I could provide an endless list of industries affected by piracy and counterfeiting around the world, this report will focus primarily on the following industries: computer software including business applications and entertainment software; motion pictures; television programs; DVDs and home videocassettes; music, records, CDs, and audiocassettes; and textbooks, tradebooks, reference and professional publications, and journals (in both electronic and print media).¹⁸ What makes these industries particularly vulnerable is the degree to which their products can be stolen, reproduced, and distributed with ease through emerging technologies like the Internet, CD-Rs,¹⁹ and DVDs²⁰.

The Business Software Alliance estimates that “the market value of this stolen (or

¹⁶Stephen E. Siwek, Copyright Industries in the U.S. Economy: The 2000 Report, prepared for the International Intellectual Property Alliance by of Economists, Incorporated, 2000.

¹⁷Department of Defense. <www.defenselink.mil/pubs/allied_contrib2000/chartIII-3.html> Figures are for 1999.

¹⁸These are the industries represented by the International Intellectual Property Alliance. Issues affecting these industries represent only a tip of the iceberg, and I certainly look forward to delving into the issues surrounding the protection of other intellectual property.

¹⁹Traditionally, consumers have been unable to record or copy music or data onto CDs, or compact discs. CD-Rs are compact discs, just now becoming widely available, onto which consumers can record or copy music.

²⁰Digital Versatile Discs (DVDs) are high-capacity optical discs on which movies and television shows can be recorded. They are often viewed as the next generation of video cassette.

‘pirated’) software alone was \$11.75 billion” in 2000.²¹ According to the International Intellectual Property Alliance, trade losses for five industries in 58 countries amount to almost \$8 billion: ESTIMATED TRADE LOSSES DUE TO COPYRIGHT PIRACY IN 58 SELECTED COUNTRIES IN 2000²²

INDUSTRY	ESTIMATED REVENUE LOSSES
Motion Pictures	\$1,242,500,000
Sound Recordings and Musical Compositions	\$1,835,600,000
Business Software Applications	\$2,490,900,000
Entertainment Software	\$1,658,400,000
Books	\$675,100,000
TOTAL	\$7,903,300,000

But what is most important is not the sheer enormity of the intellectual property sector, but rather the number of people it employs here in the United States. 4.3 million Americans are employed by the intellectual property sector, representing 3.24% of total

²¹Business Software Alliance, “Software Theft - Stopping the Piracy of Intellectual Property,” 2000. A note on numbers: Because the theft of intellectual property covers so many fields, takes place in so many places, and is an underground activity, numbers for losses of revenue, profits and jobs vary considerably. Although the figures in this report are consistent with their particular context, the most important point is the sense of scale they convey.

²²International Intellectual Property Alliance, 2001 Special 301 Report, February 16, 2001. Note that these figures do *not* represent piracy over the Internet. If such figures did exist, one can only assume that loss figures would be even more staggering. Also note that these figures represent only losses in the 58 nations being watched as part of the Special 301 process (discussed further below).

U.S. employment.²³ To provide some perspective, intellectual property businesses export more American value to the world than the automobile, automobile parts, agricultural, and aircraft industries combined. In other words, theft of intellectual property does not just affect media moguls or software titans; it robs the American economy of valuable jobs.

²³Copyright Industries in the U.S. Economy: The 2000 Report, by Stephen E. Siwek of Economists incorporated, prepared for the International Intellectual Property Alliance. 2000.

III. Piracy

Piracy has had a particularly dramatic effect on American businesses and the entertainment software industry. Their products are stolen via at least three distinct avenues:

- Disks and CD-ROMS are copied illegally, and then re-sold.
- A program can be transferred from one business work-station to another without the purchase of another version of the software, i.e., *intra-business* piracy. This latter form of piracy does not receive the attention it deserves, though the Business Software Alliance believes that it is the most economically damaging, accounting for as much as half of the industry's losses.²⁴ Some foreign governments are particularly hesitant to crack down on intra-business violations because in doing so they will inevitably interfere with firms that are doing legitimate business.²⁵
- Software and entertainment can be sent illegally from one user to another through the Internet.²⁶ By accessing so-called "warez" sites, pirates can transfer any sort of digital media electronically.

Together, these three forms of piracy have taken a real bite out of intellectual property

²⁴Business Software Alliance, "Software Theft - Stopping the Piracy of Intellectual Property," available at <http://www.bsa.org/usa/policy/copyright/software_theft.phtml>.

²⁵Judiciary Staff briefing with the United States Copyright Office, January 18, 2002.

²⁶Copyright Industries in the U.S. Economy: The 2000 Report, by Stephen E. Siwek of Economists incorporated, prepared for the International Intellectual Property Alliance.

industry revenues. And to what degree does software affect the American economy? The Business Software Alliance estimates: "In 1998, software piracy cost the U.S. economy 109,000 jobs, \$4.5 billion in wages and nearly \$991 million in tax revenues. By 2008, those numbers will rise to 175,000 lost jobs, \$7.3 billion in lost wages and \$1.6 billion in lost tax revenues."²⁷ The Interactive Digital Software Association estimates that \$3 billion in revenue was lost to the entertainment software industry in 2000, money which industry experts believe could have been used to develop 1,600 new games.²⁸

The music industry has also been victimized by piracy. Modern technology has enabled thieves to employ inexpensive, portable, CD factories which take up no more space than a small room to manufacture illegal reproductions; such facilities, each of which can produce upwards of 100,000 CDs per year, have been built all over the world. Additionally, user-friendly, piracy-enabling websites like Grokster in the West Indies, Imesh in Israel, MorphiUS in Tennessee, and KaZaA in the Netherlands, allow users all over the world to download music illegally at no expense. In addition, the advent of decentralized "peer-to-peer" technology, such as that used by the Gnutella network to permit maintenance of large databases of music without any central location, makes pursuit and prosecution of these criminal activities exceedingly difficult.²⁹ To

²⁷Business Software Alliance, "Software Theft - Stopping the Piracy of Intellectual Property."

²⁸Interactive Digital Software Association, "The IDSA's Anti-Piracy Program: Combating Piracy around the World and on the Internet," <<http://www.idsa.com/piracy.html>>.

²⁹Judiciary Staff Briefing with the Recording Industry Association of America, January 14, 2002.

date, over 100 million copies have been made of commonly used peer-to-peer software for downloading music.³⁰ The music industry estimates that piracy cost it \$4.2 billion worldwide in 2000.³¹

Finally, the movie industry is yet another victim of the growing spate of piracy. The Motion Picture Association of America estimates that as many as one million movies are downloaded illegally from the Internet each day.³² DVD copies of “Harry Potter and the Sorcerer’s Stone” were available in parts of China even before the film had hit theaters anywhere in the world, let alone been released for home viewing. Imagine the number of people who choose not to go to the movie theater or rent a film because they are able to retain a pirated copy; imagine the amount of money sapped from our economy; and imagine the number of jobs lost as a result.

³⁰Judiciary Staff Communication with the Recording Industry of America, February 8, 2002.

³¹Mazer, Roslyn A. “From T-Shirts to Terrorism.” *Washington Post* 30 Sept. 2001.

³²Valenti, Jack. “Alert to the Senate Judiciary Committee to Protect Copyright Industries in the U.S. 1 April, 2001.

IV. Counterfeiting

In their attempts to develop a customer base, companies often “trademark” their product names or symbols. “Coke,” for instance, is the trademarked name of the popular American soft drink. Customers often purchase a product simply because they identify with the label; the name on the product ensures its quality. For that reason, trademarks are extremely valuable. Oftentimes, criminals attempt to fool consumers into believing that their pirated wares are legitimate by reproducing the original product’s trademark. In such cases, the producer is guilty not only of having “pirated” copyrighted material, but also of “counterfeiting” a trademark.

The same industries which have been victimized by piracy are getting hammered by counterfeiting. Counterfeiters flood markets with their underpriced products, and steal a great deal of revenue. Additionally, as the Anti-Gray Market Alliance explains, counterfeit goods often do not maintain the same standards of quality that an original might; for that reason, marketing is often *undermined* because consumers assume that the shoddy product they purchased is authentic.

V. Piracy Around The World – A Snap Shot

Piracy rates around the world are dispiritingly high. The International Planning and Research Corporation estimates that software piracy rates are as high as 94% in China, 81% in Bolivia, 97% in Vietnam, and 89% in the Ukraine. Brazil, Mexico, Paraguay, the Philippines, Poland, the Netherlands, the Bahamas, South Africa, Egypt and Indonesia are also known to be afflicted with widespread piracy.³³ By comparison, piracy rates in the United States hover around 24%, a figure which needs to be reduced further, but is comparatively impressive.³⁴

That discrepancy points to an important problem: while the American government is relatively vigilant in trying to stem intellectual property theft, other countries have not enacted the requisite laws to prosecute intellectual property thieves. Others willingly look the other way as property is pirated and stolen, and/or lack the resources needed to police the intellectual property market adequately.

At first glance, one might assume that developing economies would benefit from loose intellectual property rights enforcement. Piracy would appear to enable firms to employ software at a diminished cost, and foreign governments often expect that any cost savings will advance economic development by increasing efficiencies and output.

In the long run, however, weak intellectual property protections stifle local innovation. Music, software, and entertainment companies simply do not invest in

³³ International Planning and Research Corporation, Piracy Study Conducted for Business Software Alliance, 2001.

³⁴ Business Software Alliance, International Planning and Research Council, 2001 Piracy Study.

nations that fail to honor or protect intellectual property rights. Ultimately, that lost investment costs nations much more than pirating and counterfeiting will ever provide. As important, local innovators are provided an enormous *disincentive* to create new products if they believe that thieves will steal whatever profit they might make. It is not uncommon for native-born innovators, such as software engineers, to leave their countries reluctantly, because their government will not protect their creations. Essentially, foreign countries that fail to enact and enforce anti-piracy laws end up doing themselves more harm than good.

Unfortunately, once a country enacts the requisite laws, summons the adequate will, and provides the necessary resources to combat piracy and counterfeiting, the criminals who profit from stealing intellectual property often simply change venue. Combating intellectual property theft is like squeezing a balloon: when you apply pressure in one area, the air inside simply adjusts and moves elsewhere. For example, when Bulgaria, once rampant with illegal piracy operations, cracked down, much of its pirating industry moved to the Ukraine, which continues today to be an important haven for intellectual property thieves.³⁵

When China began cracking down on some of the factories producing pirated compact discs, those production facilities (which, as noted earlier, are sometimes no more than a roomful of equipment) were largely moved to Hong Kong. When authorities in Hong Kong began to crack down, facilities sprouted in Macao and then

³⁵ Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

Malaysia, where a civil case against a pirate can take six years to be heard in court.³⁶

Hence, the balloon squeezing analogy: when one nation's government puts pressure on intellectual property thieves, they simply move to another part of the world.

Finally, international markets are debilitated by intellectual property theft on two dimensions. First, significant damage is done when a government fails to crack down on intellectual property theft and effectively corrupts its domestic market; this aspect of the problem is restricted to within a country's borders. Unfortunately, stolen material often floods across borders and into countries around the globe – even markets here in the United States – making pirated and counterfeit goods a problem even for countries doing an adequate job patrolling their own industries. As such, even when American authorities successfully prosecute copyright and trademark infringers here in the United States, our domestic market is affected by foreign production. Particularly as more theft moves onto the Internet, it will become difficult for a country to combat intellectual property theft initiated beyond its own borders. As such, it is tremendously important that every country participate in efforts to combat the problem.

³⁶Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

VI. Advances in Technology

What is it exactly that makes intellectual property so vulnerable to theft? First, the global economy has expanded tremendously during the last 20 years, buttressing demand worldwide for international products (entertainment and software goods in particular). Second, intellectual property is now most often transferred as digital data, which pirates can duplicate easily in *identical* form. Today, criminals can reproduce discs (CDs in the music business, CD-ROMS in the software industry, and DVDs in the world of entertainment) without degrading the quality of the recorded material. In the past, criminals who reproduced analog recordings (cassette tapes and VHS cassettes, for example) unavoidably faced a significant loss in sound quality: second generation copies were not as good as the original, and after a few generations they became virtually unusable. As a result, consumers were generally willing to pay more to ensure the highest quality sound. But the sound of a reproduced CD, even after 100 generations of reproduction, is identical to that of the original. Thus, improved technology has broken a barrier that previously limited the scope of pirated products. That breakthrough has translated into an explosion in supply: in the year 2001, DVD production increased by 9% and production capacity in Asia grew by 35%.³⁷

Second, technology advances enable counterfeiters to produce packaging that fools even discriminating consumers into believing that they are buying the legitimate product. Often, a counterfeit CD's packaging will be nearly identical to that of the original. Sophisticated software and printing equipment enable counterfeiters to

³⁷Motion Picture Association of America, "2002 Trade Barriers Report."

improve their illegal reproductions of trademarks themselves, copying even the markings (such as holograms) that trademark holders place on products to deter counterfeiting. Customs officials have even seen cases where the counterfeit packaging is of a *higher* quality than that of its legitimate counterpart.

Third, digital products can not only be marketed on the Internet, they can actually be *delivered* on line. A copy of a popular song, for example, can itself be transferred immediately through the web. Certainly, the pervasiveness of Napster's successors, such as Grokster, Morpheus, and Gnutella, indicates the extent to which the music industry has already been victimized by online piracy; indeed, illegal downloading of songs is now at its highest level ever, despite any chilling effect brought about by the industry's suit against Napster and, as noted earlier, is becoming more difficult to prosecute because of decentralization.³⁸ Until recently, only small files, such as individual songs, could be downloaded efficiently over the Internet. But the emergence of "broadband technologies," which dramatically increase the speed with which web-users can download large files,³⁹ empowers consumers to download entire albums, television program, and even full-length feature movies much more easily and quickly. Thanks to broadband, a full-length motion picture can be downloaded in less than 15 minutes, as compared to the four to five hours with conventional Internet access.⁴⁰

³⁸Judiciary Staff Briefing with the Recording Industry Association of America, January 14, 2002.

³⁹Broadband refers to high-speed access to the Internet, such as DSL or cable modems. Broadband does to Internet access what a much larger pipe does to plumbing: it gives you much more information much quicker.

⁴⁰Motion Picture Association of America, 2002 Trade Barrier Report.

In turn, groups of pirates who upload products to the web have developed so-called “warez” sites at which one can download all sorts of stolen digital media at little or no cost to the consumer. As broadband becomes more pervasive in the U.S., the problem of online piracy will only grow.⁴¹ In other countries, such as South Korea and some northern European countries, where broadband is already more widely available, the problem has already grown. A simple Internet search for the word “warez” draws over 2 million hits.⁴²

⁴¹According to the Federal Communications Commission, 7% of American households had broadband as of August 2001, a three-fold increase in 18 months. Federal Communications Commission. Third Report on the Availability of High Speed and Advanced Telecommunications Capability, February 6, 2002.

⁴²Search conducted on Google.com. February 10, 2002.

VII. Current Legal Framework

A variety of laws, both domestic and international, empower governments around the world to combat, investigate, and prosecute intellectual property thieves. But the web of protection they provide is incomplete. Officials at the U.S. Copyright Office have suggested that nations intending to uphold intellectual property rights must meet three criteria:

- First, they must develop an adequate legal framework for prosecuting intellectual property theft.
- Second, they must have the political will to enforce intellectual property laws. If prosecuting authorities, or those involved in the enforcement process, are in league with those who will profit from intellectual property theft, any number of well-written laws will be ineffective.
- Third, they must devote sufficient resources to enforcement of piracy laws. Even if adequate laws are on the books, and the government retains the requisite political will, prosecutors and judicial systems which do not receive the resources they need to handle the sheer volume of crimes before them will be unable to corral the problem.

A. U.S. Laws To Protect Intellectual Property

1. In General

Congress has passed several criminal statutes which protect intellectual property rights, including copyrights, trademarks, and patents. These statutes include:

- *The No Electronic Theft (Net) Act*, 17 U.S.C. § 506 (see below).
- *Digital Millennium Copyright Act*, 17 U.S.C. §§ 1201-1205 (see below).
- *Criminal Infringement of a Copyright*, 18 U.S.C. § 2319. For willful infringement of a copyright for financial gain, an individual is subject up to five (5) years in prison and/or a fine of up to \$250,000, for the reproduction or distribution of at least ten (10) copies of a copyrighted work with a retail value of more than \$2,500. The penalty increases to imprisonment of up to ten (10) years for second or subsequent offenses. The penalty is imprisonment of up to one (1) year and/or a fine of \$250,000 for all other cases.
- *Bootlegging Offenses*, 18 U.S.C. § 2319A. For knowing, unauthorized recording and trafficking in sound recordings and music videos of live musical performances, for financial gain, an individual is subject up to five (5) years in prison and/or a fine of up to \$250,000; and up to ten (10) years in prison for second or subsequent offenses.
- *Trademark Offenses*, 18 U.S.C. § 2320. For knowing trafficking in counterfeit goods or services, an individual is subject up to ten (10) years in prison and/or a fine of up to \$2 million (\$5 million in the case of a company); and up to twenty (20) years in prison and/or a fine of up to \$5 million (\$20 million in the case of a company) for second or subsequent offenses.
- *Trade Secret Offense*, 18 U.S.C. § 1832. For knowing theft of a trade secret for financial gain, an individual is subject up to ten (10) years in

prison, and/or a fine of up to \$250,000.

- *Offense Relating to Integrity of Intellectual Property Systems:*
 - *Fraudulent Copyright Notice*, 17 U.S.C. § 506. For knowing use and public dissemination of a fraudulent copyright, or fraudulent removal of a legitimate copyright, an individual is subject to a fine of up to \$2,500.
 - *Counterfeit Patents*, 18 U.S.C. § 497. For knowing forging of a letter of patent, or attempting to pass a known forged letter of patent, an individual is subject up to ten (10) years in prison and/or a fine of up to \$250,000.
 - *False Marking*, 35 U.S.C. § 292. For knowing use of a patent on a product, without permission, with the intent of deceiving the public, an individual is subject to a fine of up to \$500.
- *Offenses Relating to the Misuse of Dissemination Systems:*
 - *Frauds and Swindles*, 18 U.S.C. § 1341. For devising a scheme to distribute counterfeit goods through the mails or interstate commerce, an individual is subject up to five (5) years in prison and/or a fine of up to \$250,000 (up to thirty (30) years in prison and/or a fine of up to \$1 million if the violation involves a financial institution.)
 - *Fraud by Wire, Radio or Television*, 18 U.S.C. § 1343. For devising a scheme to obtain money/property by false or fraudulent pretenses, which transmits through wire, radio, or television

communication any signals for executing the scheme, an individual is subject up to five (5) years in prison and/or a fine of up to \$250,000 (up to thirty (30) years in prison and/or a fine of up to \$1 million if the violation involves a financial institution.)

- *Electronic Communication Intercepting Devices*, 18 U.S.C. § 2512. For intentional manufacture, distribution, or advertising, through the mails or interstate commerce, an electronic communication intercepting device, an individual is subject up to five (5) years imprisonment and/or a fine of up to \$250,000.
- *Unauthorized Reception of Cable Services*, 47 U.S.C. § 553. For unauthorized, willful interception of cable services, an individual is subject up to six (6) months and/or a fine of not more than \$1,000. Any person who commits such violation for the purpose of private financial gain, is subject up to two (2) years in prison and/or a fine of not more than \$50,000. For second or subsequent offenses, an individual is subject up to five (5) years in prison and/or a fine of not more than \$100,000.
- *Unauthorized Use or Publication of Communications*, 47 U.S.C. § 605. For knowing, willful publication or use of wire or radio communications, in certain instances, an individual is subject up to six (6) months in prison and/or a fine of not more than \$2,000. Any person who commits such violation for the purpose of private financial gain is subject up to two (2) years in prison and/or a fine of

not more than \$50,000. For second or subsequent offenses, an individual is subject up to five (5) years in prison and/or a fine of not more than \$100,000. Also allows the aggrieved party to bring a federal civil action seeking injunctive relief.

2. Recent Criminal Statutes

Congress passed new laws in 1997 and 1998 to specifically target the theft of intellectual property in cyberspace. These include:

- The No Electronic Theft Act (NET Act); and
- The Digital Millennium Copyright Act.

Because both Acts have been used by the Justice Department to combat intellectual property in cyberspace in particular, they are discussed in greater detail below.

a. No Electronic Theft Act (NET Act) -- 17 U.S.C. § 506

(1) Provisions

The No Electronic Theft Act ("NET Act"), signed into law in 1997, reflected Congress's determination to protect intellectual property rights which were being violated by a new phenomenon in cyberspace -- individuals who operated websites which allowed users to download pirated products for free. Such websites were created either for the amusement of the webmaster or, in some instances, as acts of self-described "cyber civil disobedience."

A loophole in IP protection statutes was exposed in the case of United States v. LaMacchia, 871 F. Supp. 535 (D. Mass. 1994). David LaMacchia, a college student, created an Internet web site where users could obtain pirated copies of commercial

software products for free. LaMacchia's website reportedly disseminated over \$1 million in free software. The Justice Department could not, accordingly, charge him with criminal copyright infringement because the statute required that LaMacchia infringe a protected holder's copyright for the purpose of financial gain – which he had not done since the items were dispensed for free. Accordingly, LaMacchia was indicted on wire fraud counts. The district court granted the defendant's motion to dismiss the indictment, finding that the defendant's actions did not satisfy the criminal copyright infringement statute or the wire fraud statute.

Congress responded with the NET Act, which created a new category in the criminal copyright statute (17 U.S.C. § 506(a)(2)) of criminal infringement that does not require a purpose of commercial advantage or financial gain. Rather, the willful reproduction or distribution, during any 180-day period, of copyrighted works with a retail value of more than \$1,000 constitutes criminal infringement, regardless of whether the defendant enjoys financial gain from his enterprise. Criminal penalties include:

- Imprisonment of up to three (3) years and/or a fine of up to \$250,000, if the offense consists of reproduction or distribution of ten (10) or more copies of a copyrighted work which has a retail value of \$2,500;
- Imprisonment of up to six (6) years and/or a fine of up to \$250,000, if the offense (described immediately above) is a second or subsequent offense;
or
- Imprisonment of up to one (1) year and/or a fine of not more than \$250,000, if the offense consists of reproduction or distribution of one (1) or more copies of a copyrighted work, which has a retail value of more

than \$1,000.

The NET Act also added a definition of “financial gain” (at 17 U.S.C. § 101) to include the barter of copyrighted works. This new definition was targeted at Internet “barter boards” where pirated products are traded for other copies rather than for money.⁴³

(2) Recent Cases

The Justice Department has aggressively pursued cases under the NET Act. Below is a summary of some recent cases as quoted from the Department of Justice’s Computer Crime and Intellectual Property Section website (<http://www.usdoj.gov/criminal/cybercrime/iplaws.htm>):

- The first conviction under the No Electronic Theft (NET) Act occurred on August 20, 1999 when Jeffrey Levy, a 22 year old University of Oregon senior, pled guilty to illegally posting computer software programs, musical recordings, entertainment software programs, and digitally-recorded movies on his Internet web site; he then allowed the general public to download these copyrighted products. On November 23, 1999, Levy was sentenced to a two-year period of probation with conditions.
- On May 4, 2000, seventeen defendants from across the United States and Europe were indicted in federal court in Illinois for conspiring to infringe the copyright of more than 5,000 computer software programs.
- On October 12, 2000, Brian Baltutat pled guilty in federal court in Michigan to software copyright infringement. He had offered approximately 142

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U.S. Copyright Office Summary of No Electronic Theft Act (NET Act).

software programs for free downloading on a web site called "Hacker Hurricane." Baltutat was sentenced on January 30, 2001, to 3 years probation, 180 days home confinement, restitution to software manufacturers, and 40 hours of community service.

- On December 15, 2000, Jason Spatafore pled guilty in federal court in California to criminal copyright infringement. The defendant willfully infringed a copyright by reproducing and distributing by electronic means copies of parts of the film Star Wars Episode I: The Phantom Menace. He did this by posting copies of parts of the film on various web sites so others could download copies of the film from the Internet. He also encouraged others to download copies of the film from those sites.
- Nine persons – who allegedly were associated with the underground software piracy group known as "Fastlane" – were indicted on February 15, 2001, for pirating more than \$1 million of copyrighted computer software, games, and movies through non-public Internet sites. All nine defendants were charged in federal court in Chicago in a nine-count indictment.
- On May 11, 2001, a federal jury in the Northern District of Illinois found Christian Morley of Salem, Massachusetts, guilty of conspiracy to infringe software copyrights. Morley was indicted last year along with 16 other defendants from across the United States and Europe for conspiring to infringe the copyright of more than 5,000 computer software programs available through a hidden Internet site located at a university in Quebec,

Canada.

b. Digital Millennium Copyright Act -- 17 U.S.C. §§ 1201-1205

The Digital Millennium Copyright Act (“DMCA”) was signed into law by President Clinton in 1998. Congress passed this statute both to implement U.S. intellectual property treaty obligations and to move the nation’s copyright law into the digital age. Specifically, the DMCA implemented two 1996 World Intellectual Property Organization (“WIPO”) treaties into the U.S. code: the WIPO Copyright Treaty and the WIPO Performance and Phonographs Treaty. The DMCA also addressed a number of other significant copyright-related issues. The DMCA created two new prohibitions in chapter 12 of Title 17 of the U.S. Code:

- Circumventing the technological measures used by copyright owners to protect their works; and
- Tampering with the integrity of copyright management information.

Civil remedies and criminal penalties are established for violating these prohibitions.

(1) Anti-Circumvention Measures

Section 1201 of the DMCA focuses on providing adequate and effective protection against circumvention of technological measures designed to protect copyrighted works. The DMCA divides technological measures into two categories:

- Measures that prohibit unauthorized access to a copyrighted work; and
- Measures that prohibit unauthorized copying of a copyrighted work.

Making or selling devices or services that are used to circumvent either category is prohibited in certain instances. (Circumvention itself is prohibited only in the first

category, not the second, reflecting the doctrine of “fair use” which allows copying in certain circumstances, e.g., a university professor lecturing on cinematography creates a CD-Rom for use in his class, featuring downloaded clips from several films.)

An example: a film distribution company develops encryption software which prevents motion pictures on digital versatile disks (“DVDs”) from being copied. A hacker utilizing reverse engineering then discovers the encryption algorithm and keys, thus learning how to copy encrypted DVDs. The hacker then proposes to post his encryption-breaking code on the web for others to purchase or use. The DMCA forbids the hacker from disseminating the encryption-breaking code which would be used by third parties to copy DVDs.

(2) Integrity of Copyright Management Information

In addition to the anti-circumvention provisions of section 1201, section 1202 of the DMCA also grants new protection for the integrity of “copyright management information” -- i.e., data identifying works, their creators, copyright owners, and other key facts (including licensing information). Copyright management information can be linked to or travel with works in a networked environment to facilitate detection of unauthorized uses, promote the payment of royalties, and provide similar benefits to copyright owners.

Section 1202 addresses both the dealing in false copyright management information and the removal or alteration of copyright management information. Specifically, the section prohibits:

- The falsification, alteration or removal of copyright management

information; or

- The trafficking in copies of works that are linked with copyright management information that has been falsified, altered or removed, if the offending party knew or should have known that its actions would facilitate infringement.

(3) Civil Remedies and Criminal Penalties

Any person injured by a violation of section 1201 or section 1202 of the DMCA may bring a civil action in federal court. The court may, pursuant to section 1203, grant a range of equitable and monetary remedies similar to those under the Copyright Act, including statutory damages.

In addition, it is a criminal offense to violate section 1201 or 1202 willfully and for purposes of commercial advantage or private financial gain. Under section 1204, penalties range up to a \$500,000 fine or up to five (5) years imprisonment for a first offense, and up to a \$1,000,000 fine or up to ten (10) years imprisonment for second and subsequent offenses.

(4) Recent Cases

Three recent cases – one criminal and two civil – have been brought pursuant to the DMCA:

Criminal

- The first indictment under the DMCA was returned in federal court in California in August 2001 against Dmitry Sklyarov and Elcom Ltd., both of

Moscow.⁴⁴ The defendants allegedly conspired to develop and traffic a software program which unlocked an on-line book encryption code; the code protected the copyright holder's interest in an electronic book by limiting access to reading -- rather than copying and distributing -- an on-line book. The defendants posted the decryption code on a Moscow website, thus enabling consumers who purchased an encrypted book to "unlock" it, and make copies. In December 2001, the federal government entered into an agreement with Sklyarov in which the Justice Department agreed to defer prosecution of the counts against him in return for his cooperation and testimony against Elcom Ltd., the Moscow website.

Civil

- Eight major motion picture studios brought suit in 2000, after computer hackers engineered decryption software to copy the plaintiffs' motion pictures on digital versatile disks ("DVDs").⁴⁵ After a website obtained and posted the decryption software, the movie studio sought a court injunction to enjoin the website from distributing the software on the Internet. Universal Studios v. Reimerdes, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), as amended, aff'd sub. nom. Universal Studios v. Corley, 273 F.3d 429 (2d Cir. 2001).

⁴⁴ See Department of Justice Website <<http://www.usdoj.gov/criminal/cybercrime/Sklyarovindictment.htm>>; and <<http://www.usdoj.gov/criminal/cybercrime/sklyarovAgree.htm>>.

⁴⁵ Jeweler, Robin and Jennings, Christopher Alan "Anticircumvention under the Digital Copyright Act: Universal Studios v. Corley." January 23, 2002.

- The district court rejected the defendants' argument that the DMCA's anti-circumvention provisions, as applied to the posting and dissemination of the decryption codes, violated the First Amendment. The court held that the code-breaking software has a functional, non-speech aspect – namely, that it permitted consumers to “unlock” film DVDs, thereby bypassing the copyright protections therein. Accordingly, the district court granted a permanent injunction against posting the decryption software.
- The district judge expressed his hope that the court's ruling would “contribute to a climate of appropriate respect for intellectual property rights in an age in which the excitement of ready access to untold quantities of information has blurred in some minds the fact that taking what is not yours and not freely offered to you is stealing!”
- The Second Circuit Court of Appeals affirmed the district court, upholding the constitutionality of the DMCA.
- The recording industry issued a public challenge in the spring of 2001 to decrypt copyright protection technology designed to protect digital music.⁴⁶ Edward Felten, a Princeton professor, accepted the challenge, cracked the code, then announced his intentions to present his findings at an academic conference. The Recording Industry Association of America

⁴⁶Jeweler, Robin and Jennings, Christopher Alan “Anticircumvention under the Digital Copyright Act: Universal Studios v. Corley.” January 23, 2002.

("RIAA") threatened to sue Professor Felten, claiming that publication of the decryption code would violate the DMCA. Felten backed down and the RIAA dropped its law suit threat. Felten then sued the RIAA, alleging that the DMCA had a chilling effect which violated his First Amendment rights. Felten sought a declaratory judgment that publication of his findings would not violate the DMCA. The federal district court dismissed his claim, but Felten – represented by the Electronic Frontier Foundation – may appeal the dismissal.

B. International Treaties To Protect Intellectual Property

There is no such thing as “international copyrights” or “international trademarks.” Rather, copyrights and trademarks are governed by national laws. That said, nations are obligated to protect copyrights and trademarks through a number of interrelated international treaties which impose minimum standards on countries party to the respective treaties. In this regard, there have been two important advancements for the international protection of copyrights and trademarks in the last decade. The first was the approval, during the Uruguay Round trade negotiations (concluded in 1994), of the Agreement on Trade-Related Aspects of Intellectual Property Rights, or “TRIPS.” The second was the approval of the World Intellectual Property Organization (WIPO) Copyright Treaty and the WIPO Performances and Phonograms Treaty (concluded in 1996).

1. TRIPS Agreement

Members of the World Trade Organization are required to comply with the TRIPS Agreement. Article 66 of the TRIPS Agreement, however, permits “least developed countries” a ten-year transition period for implementation of the Agreement; at present, 30 members of the WTO qualify for least developed country status.

The TRIPS Agreement requires all members to comply with substantive provisions of two baseline treaties – one on copyrights (the Berne Convention for the Protection of Literary and Artistic Works) and one on trademarks (the Paris Convention for the Protection of Industrial Property).

Equally important, the TRIPS Agreement imposes obligations on members to

enforce adequately the intellectual property rights protected by it. The TRIPS Agreement also provides a means to secure enforcement, if diplomacy and persuasion prove inadequate: it incorporates by reference the dispute settlement procedures of the WTO. The Dispute Settlement Understanding provides a quasi-judicial means for a member to complain about WTO violations, a process which has often been successful for the United States in a range of trade areas. The United States has initiated several proceedings against foreign governments for TRIPS violations, including against Ireland for its deficient copyright laws, Greece for television piracy, and Denmark for its failure to make available *ex parte* search remedies in intellectual property enforcement actions. These cases have all been settled to the satisfaction of the United States.

2. WIPO Treaties

Although the Senate gave its advice and consent to ratification of the WIPO treaties in October 1998, neither treaty has entered into force. The WIPO Copyright Treaty will enter into force, however, on March 6, 2002, and it is expected that the Performances and Phonograms Treaty will enter into force in 2002 (once the necessary 30 ratifications have been achieved).

VIII. Enforcement

Jurisdiction over piracy spans across not only a host of federal agencies, but also the community of nations. The Justice Department is the lead federal law enforcement agency while the State Department currently chairs a working group of U.S. Agencies that is involved in coordinating intellectual property assistance and training that is provided by the U.S. government overseas."⁴⁷

In 1991, the Justice Department created what is now the Computer Crime and Intellectual Property Section ("CCIPS") within the Criminal Division. According to the Department, CCIPS consists of "two dozen lawyers who focus exclusively on the issues raised by computer and intellectual property crime. Section attorneys advise federal prosecutors and law enforcement agents; comment upon and proposed legislation; coordinate international efforts to combat computer crime; litigate cases; and train all law enforcement groups. Other areas of expertise possessed by CCIPS attorneys include encryption, electronic privacy laws, search and seizure of computers, e-commerce, hacker investigations, and intellectual property crimes."⁴⁸ CCIPS attorneys work closely with U.S. Attorney's Office around the country in enforcing

⁴⁷ In addition, in the hopes of making each organization's contributions more accessible to those in and out of government, the State Department is currently working to create a website which will assist in an effort to better coordinate promotion of intellectual property rights abroad.

In addition, a 1999 Appropriations Act established the National Intellectual Property Law Enforcement Coordination Council, with participation by the Departments of State, Justice and Commerce, as well as the Patent and Trademark Office, the Customs Service, and the Office of the U.S. Trade Representative. PL 106-58 § 653.

⁴⁸ See <<http://www.usdoj.gov/criminal/cybercrime/ccips.html>>.

intellectual property laws as they relate to high tech piracy.⁴⁹

Moreover, the Justice Department has raised the profile of cybercrime, including high tech piracy, by the recent creation of specialized prosecution units to focus on cybercrimes. In July 2001, Attorney General John Ashcroft announced that nine additional units are being added to a program called the Computer Hacking and Intellectual Property ("CHIPS") Program that been premiered, to great success, in San Francisco. According to the Justice Department, "[t]hat project demonstrated the benefits of a unit of prosecutors working closely with the FBI and other agencies to establish a relationship with the local high tech community and encourage them to refer cases to law enforcement. The new CHIPS units are the next phase in the Department's ongoing efforts to combat cybercrime and Intellectual Property theft."⁵⁰ For now, the CHIPS units are limited to ten U.S. Attorney's Offices: San Francisco, Los Angeles, Dallas, San Diego, Seattle, Atlanta, Alexandria, Virginia, Boston, and New York (Brooklyn and Manhattan). Together, the 10 units will have a total of 77 positions, including 48 prosecutors.⁵¹

The Justice Department has worked with other federal and international law enforcement agencies in bringing criminal prosecutions against high tech pirates. For example, U.S. authorities spear-headed a 15-month investigation entitled "Operation Buccaneer." Working in collaboration with officials in the U.K., Australia, Norway and

⁴⁹The CCIPS webpage lists numerous federal criminal prosecutions brought in intellectual piracy cases. See <<http://www.usdoj.gov/criminal/cybercrime/ipcases.htm>>.

⁵⁰See <<http://www.usdoj.gov/criminal/cybercrime/enforcement.html#VIb>>.

⁵¹See <<http://www.usdoj.gov/criminal/cybercrime/chipfact.htm>>.

Finland, the U.S. executed 58 warrants in 27 cities against “warez” groups operators, seizing more than 140 computers. The operation struck at highly structured, security-conscious criminal groups specializing in “obtaining the latest computer software, games, and movies; stripping (“cracking”) copyright protections; and releasing the final product to hundreds of Internet sites worldwide.”⁵²

In another ongoing investigation, entitled “Operation Bandwidth,” officials at the Defense Criminal Investigative Service, the Inspector General Office of the Environmental Protection Agency, the FBI, and the U.S. Attorney for the District of Nevada set up and maintained a warez site for 2 years as part of an undercover investigation targeting online pirates. The site was accessed to transfer over 100,000 files, including over 12,000 separate software programs, movies and games. Over 200 people attempted to obtain “first-run movies, the latest computer games, and versions of notable software products even before they were publicly introduced.”⁵³

⁵²U.S. Department of Justice Press Release, “Federal Law Enforcement Target International Internet Piracy Syndicates.” 11 Dec 2001. U.S. Customs Service, “Operation Buccaneer Targets Software Piracy.” January 2002. A useful resource for learning about the fight against intellectual property theft generally is the website of the Computer Crimes and Intellectual Property Section of the Justice Department. It can be accessed at www.cybercrime.gov.

⁵³U.S. Department of Justice Press Release, “Federal Law Enforcement Targets International Internet Piracy Syndicates.” 11 Dec 2001.

IX. Potential Solutions⁵⁴

As discussed above, substantial laws, both international and domestic, already exist to help fight intellectual property theft. It is likely, therefore, that any successful proposals at this stage would not revolutionize the legal landscape so much as enhance our abilities to enforce the laws and treaties that exist. Based on my discussions to date with government and industry representatives, it does not appear that a major sea change is needed with respect to the substantive law. With that in mind, the following suggestions have been made by experts in the field.

A. Domestic

We cannot neglect the needs of those enforcing intellectual property protections at home and abroad, even as more time and energy is devoted to fighting international terrorism.⁵⁵ American representatives around the world need to keep intellectual

⁵⁴ This section sets forth a variety of proposals that have been made to address the problems discussed above. The list is not meant to be comprehensive. Also, as I am still studying the issue, I have neither endorsed nor opposed any of them. My purpose in discussing these suggestions is merely to inform fully the reader.

⁵⁵ Another potential cause for concern is that some evidence is emerging that organized criminals, and perhaps even terrorist networks, *may* be financing themselves in part through theft of intellectual property. According to a Washington Post article in September 2001, “eight of the 10 countries identified by a trade group as having the highest business software piracy rates in the world – Pakistan, China, Indonesia, Ukraine, Russia, Lebanon, Qatar and Bahrain – have links to al Qaeda.” Mazer, Roslyn A. “From T-Shirts to Terrorism.” *Washington Post*, September 30, 2001. In an article in *The Industry Standard*, former Attorney General Janet Reno wrote:

Criminal organizations appear to be using the proceeds of intellectual property-infringing products to facilitate a variety of enterprises, including guns, drugs, pornography and even terrorism. Invariably, when there is intellectual property crime, there is tax evasion and money laundering.

So, while we ought to focus on the extent to which intellectual property theft affects the business sector, we ought not overlook the extent to which cracking down on criminal

property protections high atop their list of priorities. Pirating and counterfeiting are sometimes subsumed by the variety of other challenges facing American diplomats and officials the world over. We need to remind them of the enormous cost incurred when we fail to protect the interests of America's businesses and workers.

Some specific proposals which others have offered to improve the fight against piracy and counterfeiting at home include:

- Dedicating more funding to the Justice Department's effort to enforce intellectual property rights.
- Enacting statutes to prohibit individuals from tampering with authentication features.
- Requiring that courts impose civil fines on those known to be importing pirated material.
- Better supporting the intellectual property center within the U.S. Customs Service.
- Working to enhance the communication between law enforcement agencies and coordination between federal and state authorities.
- Creating a fund dedicated to financing efforts to expand intellectual property enforcement through training, legislation, and technical assistance.

Some work is already progressing. For example, for fiscal year 2002, we in Congress have given the Customs Service's Intellectual Property Rights Center an additional \$5

networks internationally may provide the added benefit of crippling those who would take up arms against the United States.

million, and we have funded more attorney positions at the Justice Department to prosecute these crimes. Undoubtedly, however, more can be done.

B. International

On the international front, a key question is how can we in the United States convince foreign governments to join our effort to combat intellectual property theft. What will compel our counterparts around the world to institute and enforce proper intellectual property laws when many foreigners remain convinced that active enforcement will hobble their local economies?

First, we could use the type of bilateral trade negotiations and threats available to us in trade disputes, namely the “Special 301” process, authorized in Section 182 of the Trade Act of 1974.⁵⁶ That statute empowers the United States Trade Representative (USTR) to “identify and investigate” priority foreign countries that fail to provide adequate and effective protection of American intellectual property rights. When foreign countries fail to provide proper relief, the USTR is empowered to impose trade sanctions.⁵⁷ The U.S. Copyright Office notes that the process of investigation, in which foreign countries are placed on a so-called “watch list,” has been a tremendously successful tool.⁵⁸ Foreign countries are often disinclined to invest in a “priority country,” so governments are often anxious to avoid that designation. Hong Kong and Malaysia

⁵⁶Trade Act of 1974, P.L. No. 93-316, as amended by the Omnibus Trade and Competitiveness Act of 1988, P.L. No. 100-418. See 19 U.S.C. § 2242(a)(1)(A) (2001).

⁵⁷Morrison, Wayne M. “China-U.S. Trade Agreements: Compliance Issues.” Congressional Research Service, December 7, 2000.

⁵⁸Judiciary Staff Briefing with the United States Copyright Office, January 18, 2002.

were recently both compelled to do more to enforce intellectual property rights because the United States promised that failure to do so would impact their designation in the Special 301 process.⁵⁹

Second, we could use the power we wield in negotiating free trade agreements to compel foreign governments to implement and enforce adequate intellectual property protections. Under the TRIPS agreement, World Trade Organization members are required only to institute laws which are “sufficient to provide a deterrent” to intellectual property theft.⁶⁰ We in the United States know that authorities must do much more than that – most notably, they must prosecute those who violate the law. So, as we work to shape bilateral free trade agreements with nations like Peru, Brazil, Chile and Singapore, we should insist that the laws and policy instituted with our trading partners conform to the more stringent standards we apply domestically.

Third, we might provide an expanded arsenal of resources to foreign governments inclined to write and implement the type of intellectual property laws which will guarantee, with enforcement, that companies operating within their market have adequate protection. Many countries with pervasive problems simply do not have the resources or expertise necessary to prevent intellectual property theft, even when they understand that implementing the proper enforcement mechanisms will spur investment and economic growth. If American advisors, technology or financial resources are provided to well-meaning foreign governments, those countries will be better equipped

⁵⁹Judiciary Staff Briefing with the International Intellectual Property Association, January 10, 2002.

⁶⁰TRIPS Agreement, Article 61.

to produce the sort of legal framework we enjoy here in the United States.⁶¹ The United States government provided at least \$7.1 million worth of aid to developing countries in the pursuit of improving their intellectual property laws between 1999 and 2001.⁶² We should make sure that such programs are effective, and if they are, make them more available to countries throughout the globe.

Fourth, developing foreign countries often lack the resources required to fund and maintain the law enforcement agencies which prosecute intellectual property thieves. Enforcement agencies are often ill-equipped to fight high tech, fast-paced, well-financed criminal enterprises, and they rarely place intellectual property crime at the top of their enforcement agendas. In turn, piracy and trademark prosecutions are often given the short shift, despite the economic cost of failing to regulate the market.⁶³ The United States could support foreign law enforcement, or at least foreign agencies,

⁶¹The State Department is already doing some work in this area. For example, in February 2002, the Department will host a three-week visit to the United States for intellectual property rights officials from numerous foreign governments.

⁶²United States Agency for International Development, "United States Government Initiatives to Build Trade Related Capacity in Developing and Transition Countries, Chapter Two: WTO Awareness, Accession, and Agreements," available on the USAID website, at <www.usaid.gov>.

⁶³Those producing pirated CDs, DVDs, and CD-ROMs are dependent on a special grade of polycarbonate which is mined in only a few locations around the world. If the countries that house polycarbonate production facilities were to place better export controls, or even look into developing a way to track the polycarbonate they produce, it would be much easier to stem the production of illegal copies. For example, governments could monitor whether the amount of polycarbonate given to a disc manufacturing plant represented the amount needed to produce the discs the plant purported to produce legitimately. If those numbers were to differ significantly, a government would have good reason to suspect that pirated material was coming from the facility.

with some of the tools and training necessary to do an adequate job of prosecuting offending parties.

Fifth, we can encourage other countries that have already developed comparatively strong systems for protecting intellectual property to use their influence to persuade and cajole other governments to rise to their level. For example, the U.S. Government could press the European Union to do its utmost to raise the level of intellectual property protection in countries that seek to join its ranks.

Finally, governments are typically some of the largest purchasers of computers and computer-related services. Both because they are market leaders and because prosecution is more difficult when the authorities are themselves the beneficiaries of pirated goods, it is terribly important that governments here and around the world police themselves. In 1998, President Clinton issued Executive Order 13103. It directs all federal agencies (and that third-party contractors doing business with the Government) to utilize legal software exclusively. The United States Trade Representative was tasked with convincing our trading partners to enact similar decrees.⁶⁴ Despite that Order, evidence suggests that our government remains one of the largest violators of intellectual property rights.⁶⁵ As we continue to work to address that problem – and we must – we can encourage foreign governments to enact the same sort of policy President Clinton instituted four years ago. If nothing else, the action a government takes to stem internal piracy sends a signal to private sector criminals.

⁶⁴Executive Order 13103, September 30, 1998.

⁶⁵Judiciary Staff Briefing with the Business Software Alliance, January 17, 2002.

All of these proposals, of course, are for potential action by our government. As a Senator, that is logically my focus in reviewing this issue. Of course, any effort to fight the crime of intellectual property theft must involve substantial efforts on the part of the industries involved. For example, industries are currently working on technologies to protect their materials from illicit copying. Even as hackers and crooks become ever more sophisticated at cracking the codes, companies must continue to seek ways to thwart criminal efforts.

X. Conclusion

Intellectual property theft has, through the years, stolen billions of dollars from American businesses and hundreds of thousands of jobs from American workers. The robust global economy and the Internet have enabled worldwide commerce to flourish. As businesses struggle to adapt to the new economic landscape, we need to ensure that government authorities throughout the world, and at home, are prepared to address the new challenges before them.

As this report demonstrates, efforts to protect intellectual property are lacking, and represent an important hurdle for the development of economies around the globe. If those who invest in developing new and innovative ideas are consistently exploited, they may well give up efforts to improve technology and generate the type of art, music, literature, and entertainment that animates all our lives. More than that, if we fail to address this growing problem, millions of jobs will be lost, and we will have given into thieves and pirates.

Our efforts will inevitably be buoyed by the development of intellectual property industries around the world. As software and entertainment companies begin to flourish in foreign countries, foreign governments will realize that intellectual property theft poses a significant economic threat. The Indian film industry, as it matured, became increasingly aware that its product was being pirated. It successfully pushed the Indian government to institute adequate protections. In the future, countries may come to the United States asking for assistance in developing the type of legal framework needed to combat intellectual property crime. We ought to be prepared to assist them in our mutual interest.

Here at home, we should continue the strides made by federal law enforcement in waging an effective battle against high tech piracy. We must make sure that law enforcement has the legal tools and monetary resources to investigate fully and aggressively pursue high tech pirates – including both those who produce the pirated goods, as well as those that traffic them. We must ensure that federal laws are sufficient to prosecute all variations of high tech piracy, including appropriate civil and criminal provisions. We must maximize coordination among all the federal agencies with oversight for this crime. And we must make sure that all our citizens know that taking someone else's protected property through cyberspace is stealing, plain and simple.

Only by being vigilant in investigating and prosecuting those who steal intellectual property will we be successful in continuing to nurture the development of the music, software, and entertainment industries which employ so many people both here and around the world. I look forward to assisting our government here at home in its battle against high tech pirates, as well as urging nations around the world join the United States in the fight against intellectual property theft, and I hope that I can continue to be helpful in that endeavor. Inevitably, the landscape will change, and I intend to reevaluate and readdress new problems in the coming years to ensure that creators and innovators are fully protected under the law.